We claim:

1. A crystal of ketopantoate hydroxymethyltransferase (KPHMT) having a monoclinic space group $P2_1$, and unit cell dimensions of a = 86.1±0.2 Å, b = 157.2±0.2 Å, c = 100.2±0.2 Å and β = 97.4±0.2°.

2. A crystal of ketopantoate hydroxymethyltransferase having the three dimensional atomic coordinates of Table 1.

3. A method for crystallizing a selenomethionine KPHMT protein which comprises producing KPHMT by recombinant production in the presence of selenomethionine, recovering a selenomethionine KPHMT protein from the host and growing crystals therefrom.

4. A method of analysing a ketopantoate hydroxymethyl-transferase (KPHMT)-ligand complex comprising the step of employing (i) X-ray crystallographic diffraction data from the KPHMT-ligand complex and (ii) a three-dimensional structure of KPHMT to generate a difference Fourier electron density map of the complex, the three-dimensional structure being defined by atomic coordinate data according to Table 1.

5. A method for identifying an agent compound which modulates ketopantoate hydroxymethyltransferase (KPHMT) activity, comprising the steps of:
(a) employing three-dimensional atomic coordinate data according to Table 1 to characterise at least one KPHMT binding sites;
(b) providing the structure of a candidate agent compound;
(c) fitting the candidate agent compound to the binding sites; and
(d) selecting the candidate agent compound.

6. The method of claim 5 wherein:

a plurality of binding sites are characterised and a plurality of agent compounds are fitted to said sites; and

said agent compounds are linked to form a potential modulator compound.

7. The method of claim 5 wherein step (b) comprises selecting said candidate agent compound by computationally screening a database of compounds for interaction with said binding site.

8. The method of claim 5 which comprises the further steps of:
(e) obtaining or synthesising the candidate agent compound; and
(f) contacting the candidate agent compound with KPHMT to determine the ability of the candidate agent compound to interact with KPHMT.

9. The method of claim 5 which comprises the further steps of:
(e) obtaining or synthesising the candidate agent compound;
(f) forming a complex of KPHMT and the candidate agent compound; and
(g) analysing said complex by X-ray crystallography or NMR spectroscopy to determine the ability of the candidate agent compound to interact with KPHMT.

10. A compound which is identified as a modulator of KPHMT activity by the method of claim 5.

11. A method for determining the structure of a KPHMT homologue of the KPHMT defined by Table 1, wherein said method comprises:
(a) aligning a representation of an amino acid sequence of a KPHMT homologue of unknown structure with the amino acid sequence of KPHMT to match homologous regions of the amino acid sequences;

(b) modelling the structure of the matched homologous regions of the KPHMT of unknown structure on the structure as defined by Table 1 of the corresponding regions of the KPHMT of Table 1; and

(c) determining a conformation for the KPHMT of unknown structure which substantially preserves the structure of said matched homologous regions.

12. Computer readable media having atomic coordinate data according to Table 1 recorded thereon.

13. Computer readable media having structure factor data for KPHMT recorded thereon, the structure factor data being derivable from the atomic coordinate data of Table 1.